

WHAT IS CLAIMED IS:

1. A server system comprising:
a plurality of subsystems each including an associated memory for storing power usage information;
a power supply unit coupled to the plurality of subsystems for providing power to the plurality of subsystems; and
a server management card coupled to the plurality of subsystems, the server management card configured to retrieve the power usage information from the memory of each subsystem, the server management card configured to calculate the total power usage of the plurality of subsystems based on the retrieved power usage information.
2. The server system of claim 1, wherein the power supply unit includes an associated memory for storing power capacity information representing the power capacity of the power supply unit.
3. The server system of claim 2, wherein the server management card is coupled to the power supply unit and is configured to retrieve the power capacity information from the memory associated with the power supply unit.
4. The server system of claim 3, wherein the server management card is configured to compare the retrieved power capacity information to the calculated total power usage of the plurality of subsystems.
5. The server system of claim 4, wherein the server management card is configured to control the power state of the plurality of subsystems based on the comparison of the power capacity information to the total power usage.

6. The server system of claim 4, wherein the server management card does not allow an inserted subassembly to be powered up if the calculated total power usage would exceed the power capacity of the power supply unit.

7. The server system of claim 1, wherein the memory associated with each subassembly is an EEPROM.

8. The server system of claim 1, wherein the plurality of subassemblies include at least one host processor card, at least one hard disk card, and at least one fan.

9. A method of monitoring power usage in a server system, the server system including a plurality of subsystems and a power supply for powering the plurality of subsystems, the method comprising:

- providing each of the plurality of subsystems with an associated memory;
- storing power usage information in the memories associated with the plurality of subsystems, the power usage information stored in each memory representing the power usage of the subassembly associated with the memory;
- retrieving the power usage information from the memory associated with each subsystem; and
- determining the total power usage of the plurality of subsystems based on the retrieved power usage information.

10. The method of claim 9, and further comprising:

- providing the power supply with an associated memory; and
- storing power capacity information in the memory associated with the power supply, the power capacity information representing the power capacity of the power supply.

11. The method of claim 10, and further comprising:

retrieving the power capacity information from the memory associated with the power supply; and

comparing the retrieved power capacity information to the total power usage of the plurality of subsystems.

12. The method of claim 11, and further comprising:

controlling the power state of the plurality of subsystems based on the comparison of the power capacity information to the total power usage.

13. The method of claim 11, and further comprising:

preventing an inserted subassembly from being powered up if the total power usage would exceed the power capacity of the power supply.

14. The method of claim 9, wherein the memory associated with each subassembly is an EEPROM.

15. A server system comprising:

a plurality of removable cards, each card including an associated memory for storing power usage information;

a power supply unit coupled to the plurality of cards for providing power to the plurality of cards, the power supply unit including an associated memory for storing power capacity information;

a server management card coupled to the plurality of cards and the power supply unit, the server management card configured to control a power state of the plurality of cards based on the power usage information and the power capacity information.

16. The server system of claim 15, wherein the server management card is configured to calculate the total power usage of the plurality of removable cards based on the stored power usage information.

17. The server system of claim 16, wherein the server management card is configured to compare the stored power capacity information to the calculated total power usage of the plurality of removable cards.

18. The server system of claim 17, wherein the server management card prevents an inserted card from being powered up if the calculated total power usage would exceed the power capacity of the power supply unit.

19. The server system of claim 15, wherein the memories associated with the cards and the power supply unit are EEPROMs.